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Understanding Vulnerability and Local responses to Cyclone Disasters: Experiences from Bangladesh Coast.

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Outline of the Presentation

- Background
- Objectives and Methods
- Vulnerability Context
- Long time Adaptation Strategies
- Activities, Preparation and Coping (Pre cyclone)
- Survival and Coping Strategies (During Cyclone)
- Coping Strategies (Post Cyclone)
- Concluding Remarks

Background

- Bangladesh is a disaster prone countries with 97.1 percent of the total area and 97.7 percent of the total population at risk from multiple hazards including cyclones (World Bank 2005).
- Without an in depth understanding of the underlying vulnerabilities to natural hazards, the basis of local people's perception and behaviour and the goals they set, disaster reduction strategies are considered unlikely to succeed (Khan 1973; White 1974; Burton et al. 1993; Blaikie et al. 1994; Alam, 2003).

Objectives and Methods

➤ Objectives

- to understand in what context people are vulnerable to cyclone hazards
- Local responses and strategies to live with cyclone disasters in Bangladesh.

➤ Methods

- Primarily this research is based on cyclone response experiences in Bangladesh over the last two decades.
- Focus Group Discussions (FGD), Field visits and open ended questionnaire surveys with coastal and island inhabitant.

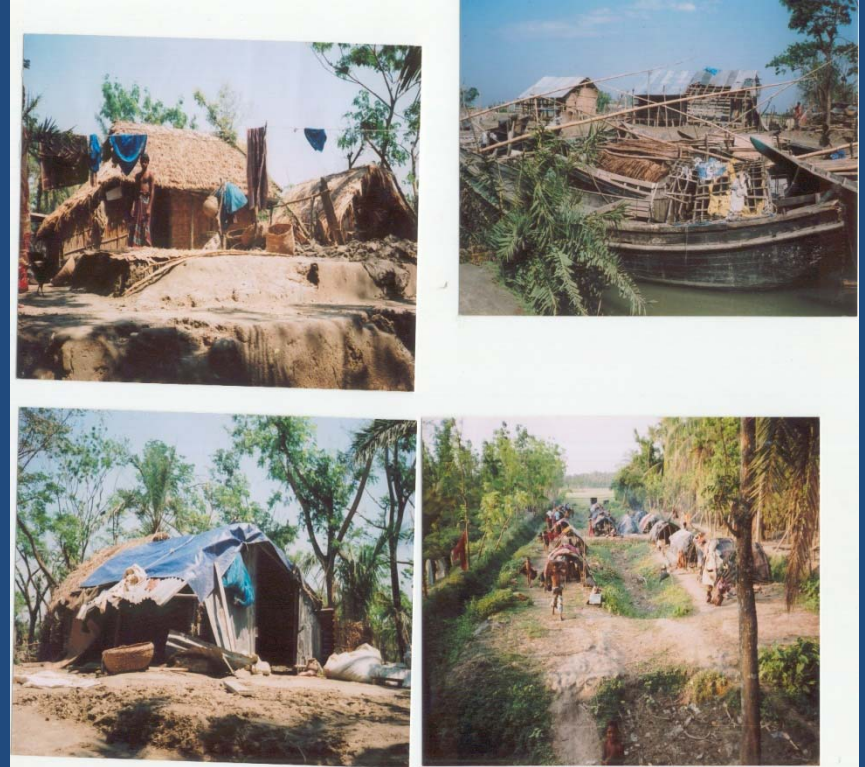
Vulnerability Context

- Isolated and scattered settlement layout.
- and settlements along the embankment.
- Spread of unprotected settlements in hazardous places.



Vulnerability Context

- Lack of proper land use management in high cyclone risk areas
- Increases of unprotected settlements in hazardous places
- Lack of specific housing policy for settling in high cyclone risk areas



Vulnerability Context

- Lack of sufficient cyclone shelters.
- Lack of adequate transportation to move to cyclone shelters during cyclonic period.
- Complex processes of warning responses.
- Wait and see techniques to responses to warning.



Vulnerability Context

- Excessive love/devotion for properties and animals
- Vulnerability of the female, children and older people.
- Female long hair and special clothing that hinder swimming in a cyclonic surge



Long time Adaptation Strategies

- Raising the height of plinth, locally called *Bithi*
- Mud used to raise the *Bithi*
- The height of the *Bithi* is average 6-7 feet from crop field.
- Planting bid branches tree surround the house.
- Thatched-roof houses were life-saving shelters during a great cyclonic surge.
- Plantation of trees surrounding the homestead to save life, houses and properties.

Activities, Preparation and Coping (Pre cyclone)

- Increasing religious activities
- Gathering crop from fields
- Hiding food and valuables beneath the earth
- Visits of social leaders in their domain area to aware for the approaching cyclone hazard
- Setting new pole diagonally around their house

Activities, Preparation and Coping (Pre cyclone)

- Increasing religious activities
- Gathering crop from fields
- Hiding food and valuables beneath the earth
- Visits of social leaders to make people aware about cyclone hazard
- Setting new pole diagonally around their house
- Letting the domestic animal free
- Trying to leave for safe places at inner part of land.

Survival and Coping Strategies (During Cyclone)

- Coastal occupants try to reach the cyclone shelters, higher places and other strong buildings.
- People forget their social class and extend help to each other.
- Those fail to reach cyclone shelters often take refuge on rooftops
- Role of local young community to save life of children, female and elders during surge water.
- Co-existence of humans, animals and wild species at different places through cyclonic surge

Coping Strategies (Post Cyclone)

- At the first step searching for kith and kin's.
- Looking for housing utensils and livelihoods.
- Active participation of the all age groups in coping with devastation.
- Having wastage food before receiving help
- Green coconut is the only source of drinking water after the cyclone.
- Adolescent girls collect water from long distances.
- Women start carrying out daily living activities more openly in this time.

Coping Strategies (Post Cyclone)

- Building special tent type of shed for those who completely lost their houses
- Internal social members and relatives assist those who are in disadvantaged position
- Role of relatives and social members, who are living outside of the affected area in Bangladesh and foreign countries for the cyclone affected people.

Coping Strategies (Post Cyclone)

- Coastal and island people wear the same *saree*, in the case of a woman and *lungi*, in a man's case for several months after the cyclone.
- The become friendly and extend all sorts of cooperation to each other.
- The occupation of fishing community changes by working in cleaning and repairing houses in the Muslim community.
- Generally fishermen go fishing separately, but after the cyclone they work as a group and share the same

Concluding Remarks

- People are not helpless but become very active in disaster.
- Emergency responses systems should be adopted based on local realities.
- Supporting livelihood rather than relief.
- Awareness generation about the scientific nature of cyclones.
- Improving transport networks to facilitate movement of people and goods during disaster events.

Concluding Remarks

- Appropriate land use policy should be adopted to settle in cyclone disaster prone areas.
- More research should be conducted to find out appropriate housing structures for coastal areas of Bangladesh.

References

- Alam, E. et al. (2003b) 'Cyclone disaster in coastal Bangladesh: Local knowledge and indigenous coping strategies'. *Bhugal Patrika* (A journal of Geography), Vol. 22.
- Blaikie, P., T. Cannon, I. Davis, and B. Wisner (1994) *At Risk: Natural Hazards, People's Vulnerability and Disasters*. Routledge, London.
- Burton, I., R.W. Kates and G.F. White (1993) *The Environment as Hazard*. Second Edition. The Guilford Press, New York. pp. 13-30.
- Collins, A.E. (2008 in press) *Disaster and Development*, Perspectives in Development Series. Routledge, London.
- Khan, A.A. (1974) 'Perception of Cyclone Hazard and Community Response in the Chittagong Coastal Area'. *Oriental Geographer*. 18(2). p.1.
- ISDR (2004) (International Strategy for Disaster Reduction). *Living with Risk: A Global Review of Disaster Risk Reduction Initiatives*. ISDR, Geneva.
- White, G. F. (ed) (1974) *Natural Hazards: Local, national, global*. Oxford University Press, New York.
- World Bank (2005) *Natural disaster hotspots: A global risk analysis*, Disaster Risk Management Series No.5. The World Bank, Washington DC.